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FIELD STRUCTURE OF PHS ENVIRONMENTAL HEALTH PROGRAMS

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STAFF STUDY REPORT

February 1964

Management Policy Staff
Office of the Surgeon General
Public Health Service

FOREWORD

Background

The identification and organization of environmental health programs and activities within the Public Health Service has been strongly influenced by three major studies conducted since April 1959. The first of these provided the basis for the Surgeon General's report on environmental health to the House Committee on Appropriations submitted in January 1960. The study was conducted by a special committee of distinguished citizens headed by Boisfeuillet Jones of Emory University and with membership drawn from universities, State and local health departments, and industry. This study strongly emphasized the need to bring together under one head and to place greater emphasis on those activities of the Service concerned with the effects of environmental contaminants on human health. This study led directly to the decision of the Surgeon General to undertake a major study of the mission and organization of the Public Health Service as a whole.

The June 7, 1960 report of the internal Study Group on Mission and Organization of the Public Health Service recommended (among other things) the establishment of a new Bureau of Environmental Health with an appropriate divisional and overhead structure. The Service has since late in 1960 sought legislation to enable the Surgeon General, with the approval of the Secretary, to establish

the Bureau. Meanwhile the recommended divisional structure has been established and grouped within the Bureau of State Services under a limited de facto separate bureau headquarters.

Between August and November 1961 another special citizens' committee of outstanding professionals and practitioners under the chairmanship of Dr. Paul M. Gross of Duke University undertook a comprehensive review of environmental health problems. The "Gross Report" recommended the establishment of a comprehensive Environmental Health Center in the Washington, D.C., area and described in general terms the elements to be included in the center. The Committee identified the Center as the major focal point for environmental health within the Public Health Service and in discussing the role of regional and field stations and facilities had this to say: "It is the Committee's opinion that such field stations and laboratories can best serve a particular environmental health program and obtain fundamental and applied data relating to some specific limited projects (such as shellfish or saline water problems)."

The recommendations of this report have in large measure guided the planning of the Service with respect to the structuring of headquarters and field environmental health activities. Authorization has been sought for the establishment of a comprehensive Environmental Health Center in the Washington, D.C., area but neither that authorization nor the authority to establish the new Bureau

of Environmental Health has been obtained. Meanwhile the separate programs of the individual divisions, particularly those of the Division of Water Supply and Pollution Control, the Division of Radiological Health, the Division of Air Pollution, and the shellfish program of the Division of Environmental Engineering and Food Protection (EEFP) have developed rapidly.

By the spring of 1963 the extent to which the actual and contemplated expansion of the programs of the several environmental health divisions was reflected in existing or planned field installations was impressive. The Division of Radiological Health had major installations in Rockville, Maryland; Montgomery, Alabama; Las Vegas, Nevada; and Winchester, Massachusetts in addition to its physical sciences and engineering research laboratory at SEC. Construction was nearing completion for both of EEFP's new shellfish laboratories -- one at Dauphin Island, Alabama, and the other at Kingston, Rhode Island -- and the small laboratory at Purdy, Washington was to continue its operation. Congress had authorized the establishment of seven regional water pollution control laboratories and two national water quality laboratories, one of them to be concerned with fresh and the other with salt water quality standards. Although none of these laboratories was actually in being, the locations of all except one had been announced. Several river basin studies were underway and many more were planned. Some of these were "comprehensive" projects undertaken as a part of a master plan for the conduct of such projects covering all major basins

in the United States during the next decade and others were "enforcement" projects to produce the data necessary to support enforcement actions initiated in accordance with the Water Pollution Control Act of 1956. The Division of Air Pollution had several field studies under way and had expanded its activities significantly in Cincinnati.

It was in the light of these considerations and developments that the Chief, Bureau of State Services, the Assistant Surgeon General for Operations, and the Executive Officer, PHS, met in April 1963 to consider the need for a study of the field structure of environmental health activities. As a result, the Management Policy Staff, OSG, undertook such a study, and carried it to completion during the period, April to December 1963.

Objective

The objective of the study was to review the division of work between Headquarters and field installations and among field installations; to consider the line and staff relationships between Headquarters and field installations and among field installations; to evaluate alternative means of providing administrative support to field installations and activities; and to make recommendations aimed at improving field structure, relationships, and support arrangements generally.

Study Method

A careful and extensive review of Headquarters activities (in Washington and Cincinnati) and the legislative, organizational, and budgetary provisions made for them constituted the first step in the study procedure. Emphasis was placed on identifying common problems, cooperative arrangements, and unifying factors among programs; on gaining some understanding of what it is practicable and desirable to do, respectively, at Headquarters and in the field; and in defining problems amenable to solution or amelioration through improvements in field structure.

Field visits could be considered to comprise phase two of this study. Three Regional Offices were visited: Charlottesville, Dallas, and Denver. At Charlottesville and Denver, principal emphasis was placed on the functioning of the Regional Health Director and those members of his staff concerned with environmental health programs and projects. In Dallas this type of review was supplemented by an analysis of administrative services provided to such activities by the staff of the Regional Director. Mr. Ernest Petrich who had previously made a study of the Chicago Regional Office servicing of the Great Lakes-Illinois River Basin (GLIRB) project participated in this review of the Dallas Regional Office.

Visits were made to the two principal locations of the Colorado River Water Project, the operation of the Arkansas-Red River Project was discussed in

Dallas, and the "Petrich" Report provided considerable information concerning the GLIRB Project. First hand knowledge of field laboratory operations was obtained through observations and discussions at the Northeastern Radiological Health Laboratory in Winchester, Massachusetts; the shellfish laboratories at Kingston, R.I., and Dauphin Island, Alabama; and the Occupational Health Field Laboratory in Salt Lake City, Utah. No study was made of the organization or administration of the Arctic Health Research Center at Anchorage, Alaska. Therefore, no conclusions relative to this Center will be offered.

Individuals contacted throughout the Service in connection with this study have been most helpful and considerate. It is hoped that they will see reflected in the discussion and recommendations which follow a reasonable and positive consensus of their thinking.

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I. ORGANIZATIONAL DEVELOPMENTS

The organizational impact of environmental health program growth on the field activities of the Service has been dramatic over the past several years. In the four years between 1960 and 1964, the environmental health budget for direct operations has increased from $13 million to $45 million, or a 235% increase. Two programs--Radiological Health and Water Pollution Control--have had increases of 380% and 290%, respectively. Yet this is only the beginning if environmental health is to meet the goal of a $100 million activity, set as a minimum in the "Gross" Committee Report. The development of laboratories and other field activities is an integral part of any expansion of the Service's environmental health programs.

Before 1958, the only environmental health field stations were the Sanitary Engineering Center and the Occupational Health Research and Training Facility in Cincinnati, and the Occupational Health Field Station at Salt Lake City. In the next three years, two water pollution control projects were started--the Arkansas-Red and the Great Lakes-Illinois River--and radiological health laboratories were opened at Las Vegas and at Montgomery, Alabama. In the fall of 1961, the third radiological health laboratory was activated at Winchester, Massachusetts, and by mid-1963 the shellfish sanitation research center at Dauphin Island, Alabama, was operational and construction of the one at Kingston, Rhode Island, was nearing completion. With Congressional authorization now at hand for seven regional water

pollution control laboratories and two water quality laboratories, it is obvious that the expansion of field activities will proceed at an even swifter pace. Some 19 comprehensive water projects are planned for the next ten years. Other environmental health program expansion in the field will certainly occur in the next few years, even though its precise direction and size may not be as clearly charted as that of the water program.

A. Changing Role of SEC

Prior to 1958, the Sanitary Engineering Center was the principal field laboratory of the Division of Sanitary Engineering Services, a division which carried the Service's responsibilities for water pollution control, radiological health, and the engineering aspects of air pollution, as well as the more traditional general public health engineering and sanitation work. The Center had branch status, its Director received both program and administrative direction from his Division Chief, and the specialized branches in Washington served as staff advisors to the Division Chief and had no line relationships with SEC. Under this arrangement, the organizational relationships were clear and straightforward. The Occupational Health activity in Cincinnati was a field activity of the Division of Special Health Services and had essentially no program relationships with SEC.

The tremendous expansion of the environmental health programs, which brought divisional status, specific legislative authority, and separate budgetary support for the water pollution control, radiological health, and air pollution programs had its corresponding effect on the SEC establishment. The new divisions felt a need for, and secured, direct control over their research activities. Today, SEC is no longer an organizational entity in its original sense. There is, rather, in Cincinnati an assortment of components of five operating divisions (including the Division of Occupational Health) and a well developed grouping of centrally directed support and service activities. Seven important branches of Washington-headed divisions and seven complete sections of Washington-headed branches are in Cincinnati. It is neither feasible nor desirable to inject the Office of the Bureau Chief, in the form of the Director, SEC, into the line between a division chief in Washington and a branch chief in Cincinnati, or between a branch chief in Washington and a section chief in Cincinnati.

On the other hand, the Bureau's operational coordination of training activities is based in Cincinnati; and bureau-level program and administrative data processing as well as administrative services of an operational character--personnel, procurement, and fiscal--are well developed there to support engineering and physical sciences laboratory activities. The public image of the Service and local public relations in Cincinnati also require central attention there.

In Cincinnati, the Service has in-depth engineering and physical science expertise in all of the environmental health programs. Collaboration among them is desirable and should be fostered.

The Occupational Health Research and Training Facility in Cincinnati which is now a part of the Environmental Health grouping has never been a part of SEC, yet it uses SEC central administrative services in almost the same way as do the other Environmental Health components in Cincinnati. Except in the training area, where Occupational Health seems somewhat more independent, there appears to be little difference in the actual relationships between the Director, SEC, and SEC program branches and sections and his relationships with Cincinnati activities of the Division of Occupational Health.

The relationships in Cincinnati have evolved somewhat informally, are working well, and should be recognized as an established pattern.

RECOMMENDATION. It is recommended that:

1. The Office of the Director, SEC, be recognized as the component of the Office of the Bureau Chief responsible in Cincinnati for local public relations, the facilitation of intra-bureau collaboration and coordination, and the provision of administrative and other supporting services to all divisional components located there.

Taft Center is named by Law - Eng. Center

2. The head of the Cincinnati component of the Office of the Bureau Chief be designated Executive Director, Robert A. Taft Environmental Health Laboratories.

B. Associate Regional Health Director for Environmental Health

When in 1961 the Regional Health Directors were made directly responsible to the Surgeon General and the environmental health grouping of divisions was organized in the Bureau of State Services, the position of Associate Regional Health Director for Environmental Health was established in each Regional Office. It is through those officers that an image of the totality of the environmental health complex of activities is conveyed to the States. Occupants of this position might be said to personify the environmental health bureau concept in the field structure.

The PHS Organization and Functions Manual contains a general statement of the functions of this position. This has been supplemented by the Chief, BSS, who has placed emphasis on the role of these officers in maintaining contacts and developing relations with universities, voluntary associations, and other agencies with environmental health interests throughout the region.

There is, nevertheless, a need for more active coordination and support of the execution of these functions. The requirements of this position

are not always easily defined or discharged in practicable operating situations. The Associate Regional Health Director must avoid over-involvement with the details of any single program while facilitating the operation of all of them. Program consultation involving individual State officials and overlapping program activities of the divisions must be coordinated. Matters not falling within the purview of any single divisional representative must be assigned or handled personally.

There are many combinations of field operations which bring together two or more program interests. Ship sanitation and radiation surveillance in the construction of atomic powered ships is an example. Another is sewage disposal and shellfish sanitation in an area such as Hampton Roads. Assurance that the proper program coordination is achieved in all such situations requires the active participation of the Associate Regional Health Director for Environmental Health.

There are many matters requiring action on the part of the Regional Health Director with respect to which it is important for him to have a source of technical advice and assistance independent of individual program involvement. His Associate for Environmental Health should provide this support.

An impression gained through the current study is that each present incumbent of this position has had to develop his own specific role and modus operandi virtually unassisted. Since these men are among the most experienced and talented engineers in the Service, the individual accomodations worked out, while differing considerably, all have their productive aspects. However, a more active relationship between the Associate Regional Health Directors for Environmental Health and the Bureau Headquarters, and more frequent collaboration among these officers are needed to achieve their most effective utilization.

This Headquarters relationship and multi-regional collaboration could be built around constructive projects requiring non-categorical program study, observation, and problem analysis; and around participation in general environmental health program planning. As a group the Associate Regional Health Directors belong in the vanguard of comprehensive environmental health program development. It is from that vantage point that they would be best able to provide the leadership needed in their own regions. Assignment of responsibility for active liaison with them and for the development of their full potential might well be made a key responsibility of the Associate Bureau Chief for Environmental Health.

RECOMMENDATION. It is recommended that:

3. A Bureau directive further defining the authorities and responsibilities of Associate Regional Health Directors for Environmental Health be issued. This should develop more fully the functions described by the Bureau Chief in his staff meeting of June 10, 1963, and should also be based on the experience in this position of each of the present incumbents.

4. A continuing program to develop the full potential of the position of the Associate Regional Health Director for Environmental Health be actively pursued.

C. Major Projects

The operation of comprehensive river basin projects and major enforcement projects under the technical direction of the regional program directors has a number of very important advantages. The prosecution of these projects involves the collection of an enormous amount of data from existing sources as well as through direct measurements. The decision as to what measurements need to be made can be reached only after data available from existing sources have been taken into account. The identification and evaluation of, and entree to, existing data sources in other Federal agencies, State and local government organizations, and industrial establishments are greatly facilitated by the regional organization.

The operation of these projects under the technical direction of the Regional Offices also has the advantage of making the regional program directors full participants in the planning of these important operations. This has tended to encourage inter-regional collaboration on methodology and on the effective utilization of manpower and other resources. This is particularly important in view of the building up and tapering off of individual projects in various parts of the country.

It is important that leaders of industry, government, and private organizations interested in basin developments have an opportunity to contribute

to the success of these projects. Regional Office staff knowledge of the area, its people, programs, interests and resources is a tremendous asset in obtaining this kind of collaboration. The ultimate value of a comprehensive or major enforcement project depends upon the degree to which it serves as a guide for subsequent action. Although some of these projects may require several years of work, they are essentially temporary in character. The burden of follow-through will fall upon local interest groups and the permanent regional organization. It is important, therefore, that these projects capitalize upon and strengthen existing Regional Office relationships rather than establish, and subsequently relinquish, their own.

Some concern was voiced at Headquarters with respect to the feasibility of continuing to operate comprehensive river basin studies under the direction of Regional Office program directors. It was pointed out that river basins never conform to HEW regional boundaries and consequently may present serious jurisdictional problems when dealt with through the regional organization. This fear was not found to be valid through field observations made during the course of this study. The procedure adopted by the Division of Water Supply and Pollution Control of assigning responsibility for a basin study to a designated regional water program director, who in turn is expected to use the regional water program directors of the other regions involved as advisers and to keep them

fully informed, appears to be entirely practicable. Two factors contribute to the avoidance of any major problems of regional jurisdiction with respect to river basins. The first is the fact that a regional program director assigned work that involves operations in other regions as well as his own is probably more aware of his counterpart's need to know, and ability to contribute through consultation, than anyone who is not himself a regional program director. A second factor is the tremendous amount of work to be done. With the mammoth comprehensive river basin programs and the enforcement projects competing for attention and resources, there is an abundance of work to go around.

Although the findings of this study confirm the soundness of the decision to place the comprehensive and major enforcement projects under the program direction of Regional Offices, no justification could be found for burdening the limited Regional Office administrative staffs with the administrative support of these projects. Direct operations of this size and technical character produce support requirements quite different from those of the normal Regional Office establishment. It clearly is not feasible to adjust Regional Office resources to cope with these unusual and sporadic requirements. The alternatives will be discussed later in this report for each type of support required.

The organizational placement of other field projects and activities must be individually determined. Such activities vary in purpose, size, scope, degree of permanence, and geographical location. There are research activities such as the Air Pollution studies in Birmingham, New Orleans, Los Angeles, and St. Louis. There are single-person interstate carrier inspection stations and single-person assignments to States, universities, and to other Federal agencies.

Two factors are paramount in determining whether or not a project should be placed under the technical supervision of the Regional Office. A need for continuing State and local health agency participation weighs heavily in favor of Regional Office technical supervision of a project. Instances were noted in which division officials consulted directly with State and local health agencies, by-passing the Regional Office and their own Division's regional consultant. The position of the Regional Office as the principal channel of communication with local officials needs to be maintained and respected. On the other hand, highly scientific project content tends to weigh against Regional Office supervision. These factors are not mutually exclusive and must be weighed carefully in establishing the modus operandi for each individual project.

RECOMMENDATION. It is recommended that:

5. Comprehensive river basin projects and major water pollution control enforcement projects be operated under the technical direction of the appropriate regional program director.

6. Regional Offices not be burdened with the administrative support of comprehensive river basin, major enforcement, and other large technical projects.

7. Any field project involving significant relationships with State or local health agencies be operated in such a way as to strengthen rather than circumvent the regional organization.

D. Single Program Field Laboratories

Single program field laboratories are becoming a significant feature of the environmental health field structure. Although progress toward the establishment of the Environmental Health Center as the proposed new bureau's headquarters has been delayed, rapid progress has been made in developing this field complement.

1. Advantages

The individual program field laboratory enjoys many advantages. It can be located for easy access to its physical input requirements, to resources for scientific collaboration, or (under the best of circumstances) to both. It can provide an atmosphere and working conditions very attractive to staff and conducive to productivity. A small well-equipped laboratory within reach of a university having library facilities and course content in its general area of scientific interest can compete very favorably for professional and technical personnel. Supporting staff find it satisfying to be more directly identified with program than would be possible in a large formal structure. The officer-in-charge is not excessively diverted from technical program direction by the managerial complexities that accompany bigness.

A single program field laboratory by virtue of being a special purpose facility can readily achieve an understandable public image. Properly developed and projected this image can be both attractive and prestigious. Small, well-directed and managed, and understandable, field laboratories have little difficulty in gaining local cooperation. Each laboratory visited could cite very beneficial local arrangements which involve practical

operating understandings it might be difficult to achieve at higher bureaucratic levels.

2. Needs

The needs of single program field laboratories must also be recognized. Competent and unequivocal on-premises leadership is their single most important requirement. The small size and the singleness of purpose of these laboratories will argue for a single chief and against fragmentation of the command function. Upon this will depend the scientific atmosphere, the internal staff relationships, the public image, and the cooperative arrangements the installation will develop. If branch officials are permitted to establish independent lines of command to subordinate laboratory personnel, the unity of the laboratory will be destroyed and the position of its director weakened. Therefore, no effort should be spared in structuring them and their Headquarters relationships to avoid placing an officer-in-charge in a position of "presiding over" activities under the remote and separate control of several Headquarters branches.

A major emphasis on effective communication is the second key to successful operation of these field laboratories. It begins with a system of program planning which takes into account the interests and proposals of the "bench" scientists in the field laboratories in an effective and realistic manner. Otherwise, worthwhile avenues

of research may be overlooked and projects that are adopted may never be understood fully by those expected to carry them out. This emphasis on communications must carry through to the basic products of the laboratory. It should be reflected in the quality and timeliness of reports of sample analysis, reports of laboratory operations and program developments, and in full participation by key staff members in the presentation of scientific papers and the authorship of scientific publications. There also is a need for well devised and maintained systems of continuing communication between Headquarters and field laboratories, and among field laboratories. These should involve periodic meetings as well as direct written communications and exchanges of papers and reports. The Division of Radiological Health appears to have made significant progress in this area among its own Headquarters and field components. Eventually the scope of the active communications effort will have to be broadened, but strong intradivisional efforts are a necessary first step.

As special purpose stations, single program field laboratories need the general purpose complement to be provided by a Headquarters which includes the comprehensive Environmental Health Center. The Center, through human effects research, should contribute significantly to the refinement of the objectives of single program field laboratory analysis and surveillance activities.

As administratively small organizations, field laboratories need sources of administrative support that it would be uneconomical either to do without or to build into their individual structures. Means of providing this support is discussed later in this report.

3. Laboratory - Regional Office Relationships

Field laboratories are permanent, special purpose establishments. They are scientifically oriented toward research and analysis. They have visibility, professional image, and continuing relationships in their own right. They are more typically involved in sample analysis than in data collection. Technical collaboration on the substance of laboratory programs and activities is normally found at Washington Headquarters, SEC, and with other research, engineering, and laboratory organizations rather than the regional organization.

The products of laboratory operations are not action programs to be carried out through the regional organization. Laboratory output takes the form of reports on the physical and chemical properties of samples analyzed, of scientific papers and publications, and of periodic and special reports. These products become a part of the public domain of the scientific community and the laboratories remain available for consultation with respect to them.

The requirements of laboratories for administrative support differ significantly from that normally provided the Regional Office establishment. This is particularly true in the areas of scientific and technical personnel and supply management.

Regional Offices and field laboratories can and do complement one another, but neither has much to offer the other in the area of program direction. Laboratories need the assistance of Regional Offices in making arrangements for sample collection and for special field party activities carried on in collaboration with the States and for establishing other necessary relationships. Regional Offices need the technical resource provided by laboratories to backstop their consultations. The public image of the Service and the Department as well as the morale of Regional Office and laboratory employees can be enhanced significantly by the cultivation of effective Regional Office - field laboratory relationships.

4. Shellfish Sanitation Research Centers

The new shellfish research centers (categorized as single program field laboratories for the purposes of this report) at Kingston, R.I., and Dauphin Island, Alabama, have the potential for realizing all

of the principal advantages of installations of this type. Each is well equipped and well located. The Kingston Laboratory provides ready access to East Coast and the Dauphin Island Laboratory to the Gulf Coast shellfish growing areas. Along with the older laboratory at Purdy, Washington in the Northwest, they provide reasonable field coverage for the Shellfish Sanitation Branch. Each of these laboratories also has good university relationships. In addition, the Purdy laboratory enjoys cooperative arrangements with the State of Washington Health Department; the Dauphin Island Laboratory is adjacent to and works with the State of Alabama Fisheries Laboratory, and the Kingston Laboratory has good relationships with the nearby Oceanographic Laboratory of the University of Rhode Island and the State of Rhode Island's reactor for the production of isotopes for biological laboratory use. When, in addition, the interests of the Navy, of the Northeastern Radiological Health Laboratory, and the planned water quality laboratory of the Service, of Woods Hole Laboratories, and the Interior Department's nearby Fish and Wildlife Laboratory are taken into account; it seems probable that the PHS installations in the New England area will be important components of what may become the nation's outstanding scientific community concerned with the marine environment.

The directors of the shellfish laboratories do participate with the Chief, Research Investigations Section, Shellfish Sanitation Branch, in program planning and are both technically and administratively in charge of their installations. The Chief, Research Investigations Section, has spent most of his time in the field getting these laboratories established and is scheduled to be moved into Washington as soon as they are fully operational. When this occurs, consideration should be given to redesignating his position "Research Coordinator, Shellfish Sanitation Branch," in order to make the Branch Chief the reporting point for the laboratory heads and to avoid administrative layering while preserving the very important research program coordination function.

5. Radiological Health Laboratories

Although the establishment of radiological health laboratories at their present locations was frankly opportunistic to meet pressing needs in a timely manner, the resulting distribution is not bad. The Las Vegas Laboratory is well located with respect to its primary mission (radiological surveillance related to atomic testing), to its relationship to the AEC establishments in that area, and to the continuing interest in this technical field of the University of Nevada.

The Northeastern Radiological Health Laboratory is well located in relation to the New England scientific community and surveillance activities in the Northeast. It also is in a position to pursue, in addition to its other interests and responsibilities, research related to radiological contaminants in the marine environment.

The Rockville Laboratory provided facilities for a needed expansion of Headquarters pending the establishment of the Environmental Health Center. Only the Montgomery Laboratory appears to have serious disadvantages in terms of its location. It is not located in an established scientific community or a good transportation center for program purposes. A need does exist for a radiological health laboratory in the southeastern United States but a better location might be found for this facility.

Radiological health laboratory heads report to the Chief, Technical Operations Branch. Some revision of the division of responsibilities between the Technical Operations Branch and the Research Branch would make possible a better alignment of laboratory activities with Headquarters program direction. The principal interest of the Research Branch Chief lies in the area of biomedical and human effects research. The laboratories are engaged in radiological surveillance and related chemical analysis, research in

the physical sciences, and engineering. Research related to environmental measurements, quality control, and instrumentation is a necessary adjunct to effective monitoring and surveillance. The physical and chemical research at the Northeastern Radiological Health Laboratory which was originally financed by the Research Branch has been transferred to the Technical Operations Branch. This shift of responsibility and funds did eliminate an unnecessary complication in the area of fund control and Headquarters-field laboratory relationships. If this division of responsibility is made applicable generally, it would avoid multiple supervision of laboratory activities. It would also result in the transfer of most of the SEC component of the Research Branch to the Technical Operations Branch.

RECOMMENDATION. It is recommended that:

8. The functions and responsibilities of the Research Branch and the Technical Operations Branch, Division of Radiological Health, be realigned to make the Technical Operations Branch responsible for all physical sciences research and engineering.

6. Water Pollution Control Laboratories

At the present time, the resources of the Division of Water Supply and Pollution Control are concentrated in the Washington Headquarters, SEC, and the regional organization which operates the comprehensive river basin and enforcement projects in the field. The Water Pollution Control Act authorizes and directs the establishment of a minimum of seven [regional] water laboratories, while the establishment of two national water quality laboratories, one for fresh water and one for salt water research, has been provided for by recent appropriation acts. None of the nine new laboratories is actually in being at this time. However, the specific locations for all of these except the Mid-Atlantic regional laboratory have been announced.

[From an operational standpoint, either in terms of topography or transportation, some of the locations selected are less than ideal.] The areas west of the Mississippi having serious water problems and not readily accessible either to the Ada, Oklahoma, or Corvallis, Oregon regional laboratory locations may be expected to impose particularly difficult operating requirements. There is a relationship with an educational institution proposed for each laboratory.

a. Water Quality Laboratories

The water quality laboratories to be established at Duluth, Minnesota, and Kingston, R.I., will conduct research to provide a significant part of the scientific basis for national water quality standards for both fresh water and salt water. These laboratories will be engaged in basic research and should be made components of the Research Branch (now called the Basic and Applied Sciences Branch) of the Water Supply and Pollution Control Division. Heads of these laboratories should be directly responsible to the Chief of that Branch.

b. Regional Water Laboratories

The role of these laboratories as specified in the enabling legislation is "research, investigation, experiments, field demonstrations and studies, and training." In considering this mission in the light of the capabilities and requirements of a small regional laboratory, the following observations are pertinent:

(1) Research -- The basic research program of the Division has to be nationally planned and controlled. Most of the major problems requiring the development of new knowledge exist in differing degrees in many parts of

the nation. Unless the basic research program is centrally planned and controlled, popular problems will be subjected to investigation in several if not all regional laboratories while others are overlooked entirely.

The Research Branch might from time to time find it desirable and appropriate to station some of its investigators at a [regional] laboratory temporarily to carry out a particular line of investigation. It is believed, however, to be in the best interest of the program not to have a permanent component of a regional laboratory over which the officer-in-charge exercises no program direction. Research Branch members temporarily assigned to a regional laboratory should be provided space, laboratory services, and administrative services by the local establishments.

(2) Investigations, Experiments, Field Demonstrations and Studies -- Activities of this character are now carried on by the Technical Advice and Investigations Section, Technical Services Branch. Responsibility for the "applied sciences" activities of the present Basic and Applied Sciences Branch that can best be based in regional laboratories should be transferred to the branch responsible for regional laboratory operations. Technical services to States and local problem oriented applied research combined with

laboratory services should form the hard core of regional laboratory activities. These regional laboratories would then be in a position to provide effective problem oriented backstopping for the regional consultants and deal with the application of existing knowledge to problems to which these laboratories would have access. It is also reasonable to anticipate that, with the establishment of the regional laboratories, the sample analysis and other local Water Quality Network responsibilities of the Basic Data Branch will be decentralized. These requirements are reasonably predictable and can be carried out by the regional laboratories on a reimbursable basis without any interference with the "single line of authority" concept.

(3) Training -- Each officer-in-charge of a regional laboratory should have as a member of his staff a competent training officer with one or two sub-professional assistants. It should be the responsibility of the training officer to conduct certain routine training, to arrange through appropriate laboratory personnel for on-the-job training for State and local and industry personnel, to plan and make arrangements for short courses to be conducted at the facility under the general direction of Headquarters training staffs, and to assist in career development planning for laboratory personnel. The training officer should be directly responsible to the officer-in-charge but should have strong technical backstopping from Divisional and Bureau training organizations.

In order to provide for effective supervision of these laboratories, some realignment of the Headquarters branch structure will be necessary. The Technical Services Branch, with its technical assistance functions and its responsibilities for river basin and enforcement project planning and control, is already overburdened. It should be split into two branches - a Basin Projects Branch for major project planning and control, and a Technical Operations Branch to direct the regional laboratories, to undertake technical field studies and to provide technical assistance to States.

The net results of the adoption of these concepts and changes would be: (1) to concentrate the basic research functions of the Division in the Research Branch with activities in Cincinnati and the two Water Quality Standards Laboratories; (2) to assign applied research and field studies and supervision of regional laboratories to the proposed Technical Operations Branch, (3) to establish a Headquarters branch exclusively devoted to the central planning and coordination of projects; and (4) to establish a clear line of authority from each laboratory director to a single Branch Chief. — He will be an asst. Div. Chf. acting for the chief

The regional laboratories should carry on surveillance work and develop instrumentation related to it. They should make studies of specific situation pollution problems in their areas, apply present knowledge to their solution, and identify basic research needed to achieve better solutions. They should respond to technical assistance requests of Regional Offices and arrange

through Regional Offices for pilot plant and other pollution abatement demonstrations. They should carry on a full schedule of sample analysis and reporting. They should provide laboratory and other training opportunities for State, local, and industry engineers and technicians.

RECOMMENDATION. It is recommended that:

9. The Basic and Applied Sciences Branch be redesignated the Research Branch, and that the Technical Services Branch be replaced by a new Technical Operations Branch and a new Basin Projects Branch.

10. The Water Quality Laboratories be made components of the new Research Branch and the Regional Water Laboratories be made components of the new Technical Operations Branch.

11. Responsibilities be assigned to the new branches substantially as follows:

    a. Research Branch - responsible for basic research and engineering.

    b. Basin Projects Branch - responsible for major project planning, scheduling, coordination, and control.

    c. Technical Operations Branch - responsible for field studies and demonstrations, technical assistance and field laboratory training, field laboratory services (including sample analysis and related services for the Basic Data Branch on a reimbursable basis) and related applied sciences activities.

Summary

Environmental health program activities located in Cincinnati no longer constitute a discrete organization in the sense that the Sanitary Engineering Center once did. They are integral parts of various Headquarters organizations and should be frankly recognized as such.

Environmental health activities require strong leadership and coordination through the regional organization. A great deal more needs to be done to develop the position of Associate Regional Health Director for Environmental Health. Comprehensive river basin and major enforcement projects have placed heavy demands on the regional organization. Nevertheless, they should remain under the technical direction of regional program directors. It is not necessary or desirable for Regional Offices to provide their administrative support.

Single program field laboratories have unique advantages and special needs which must be met. These installations should be direct responsibilities of their parent headquarters organizations. Regional Offices and field laboratories can and do complement one another, but neither has much to offer the other in the area of program direction. Some realignment of branch structure at Headquarters is desirable to achieve the most effective Headquarters - laboratory relationships.

II. ADMINISTRATIVE SERVICES

A. Present Arrangements

An important feature of the developing environmental health field activities is that they are both small in size and widely dispersed in geographic location. Except for the Cincinnati and Washington areas, there is no location with as many as 200 employees; and only the Great Lakes-Illinois River Basin Project and the Las Vegas Radiological Health Laboratory have as many as 100. The combination of small size and geographic dispersion is dictated by program determinations, but it renders more difficult and more expensive the provision of adequate administrative support. For example, one personnel generalist might well serve 250 employees, one payroll clerk may be able to payroll 300-400 employees. None of the laboratories or field projects established in the last five years (or planned for the future) is of such size.

Without being able to provide a full range of administrative competencies at each field station, the several divisions have improvised differing administrative support arrangements with little central guidance or control. The present arrangements are as follows:

1. Water Supply and Pollution Control

The comprehensive river basin and enforcement projects have received both program supervision and administrative services from the Regional Offices, except that position classification authority is limited to clerical and administrative positions of GS-8 and below and appointing authority extends through GS-12. Actions beyond these limitations are submitted to Washington Headquarters.

2. Occupational Health

The Occupational Health Field Station at Salt Lake City receives only administrative services from the Regional Office.

3. Radiological Health

The three radiological health laboratories receive accounting services from PHS hospitals on a reimbursement basis. All three laboratories exercise delegated authority for "open-market" procurement up to $2500 and refer other procurement to Washington. Las Vegas has classification authority through GS-8, and appointment authority through GS-12, but Montgomery and Winchester have no personnel authority and must look to Washington Headquarters for support in this area.

4. Environmental Engineering and Food Protection

The two shellfish research centers receive accounting and procurement services from SEC on a contractual basis, and personnel services from Washington. The laboratory at Purdy, Washington, receives all administrative services from SEC.

The heterogeneous pattern of administrative servicing of field installations has worked reasonably well in some instances, not so well in others. It is certainly not the system that one would select to provide effective, modern, administrative services on a permanent basis to a greatly expanded number of field installations.

B. Guiding Principles

The term "administrative services," as used in this report, is considered to include: supply management, fiscal services, personnel management, and that group of building maintenance and general service responsibilities inherent in operating any independent field station. In evaluating alternate methods of providing these support services to the environmental health field activities, certain guiding principles and tentative conclusions were formulated. The most significant of these can be summarized as follows:

1. The maximum possible amount of decision-making responsibility should be decentralized to heads of field activities, but modern technological developments in data processing may argue, in many instances, for a centralization of administrative services. These are recognized principles of administration applicable equally to Environmental Health or any major undertaking with a sizeable field component.

2. If an administrative servicing point is outside the normal commuting area of the station it serves, it matters little if it is a thousand miles

distant. The principal delay in the movement of paperwork is not in the U.S. Postal Service, it is in the number of desks over which a document must pass.

3. It is essential that a clear distinction be made between the carrying out of an administrative service and the decision-making on whether that service should be accomplished. It is the distinction between procuring a typewriter and deciding that a typewriter is needed; between issuing a journal action appointing John Jones and deciding that John Jones would make a good GS-11 chemist for "x" laboratory. This appears to be a simple distinction, but the lack of a clear separation between the two responsibilities is probably the greatest single source of administrative friction, misunderstanding, and delays. Too often a processing unit interposes its judgment on the desirability of an action as distinguished from its legality.

4. It is entirely feasible, and may frequently be advantageous, to establish separate lines for program supervision and administrative servicing.

5. Any system of providing administrative support must have the flexibility to permit variations. For example, the amount of procurement authority delegated to a field station may need to vary

in accordance with (a) size of station or dollar volume of procurement, (b) types of equipment and supplies needed, (c) availability of a well-trained procurement technician, or (d) proximity to adequate market sources for laboratory supplies and equipment.

6. In arriving at the best administrative support arrangement for any one station, each type of administrative support must be considered separately. For example, there is no reason why procurement actions and classification actions need to flow through the same channels. On the other hand, all necessary interrelationships should be recognized and should be facilitated to the maximum extent practicable.

7. The successful procurement of expensive and highly sophisticated equipment, such as that used by the environmental health laboratories, not only requires thoroughly trained and highly competent procurement officials, but also demands that they have easy access to scientific advice in the development of specifications.

8. Preferably, a central administrative servicing point for field activities should have: (a) well qualified chiefs in charge of each administrative area, (b) adequate subordinate staff and a capacity for expansion, (c) modern ADP capabilities, and (d) an understanding

of and a consequent responsiveness to environmental health program needs and priorities.

C. Assignment of Functions

A careful review has been made of present organizational arrangements, existing resources, and the anticipated impact of projected increases. On the basis of these factors, and in keeping with the principles outlined above, certain basic decisions concerning the proper assignment of functions can be made. Some of the functions can be most effectively carried out at a central servicing point where a high degree of specialization is available. Some responsibilities, by their very nature, must be discharged locally. Other responsibilities can best be divided between the local station and a central servicing point.

1. Supply Management

The procurement service at SEC has attained an excellent reputation for successful procurement of scientific supplies and equipment. This is partly because this is the only station at which trained procurement officers have ready access to the advice of research scientists from each environmental health program. This SEC procurement service should be used and not duplicated by environmental health field stations.

RECOMMENDATION. It is recommended that:

12. SEC be the focal point of field environmental health procurement and as such, (a) exercise advertised contracting authority as covered by specifications CA-1 and CA-3, (b) train and provide continuing guidance to staff performing procurement functions in Environmental Health field stations and major projects, (c) carry out procurement which for any reason is beyond the competence of small stations, and (d) provide leadership in promoting an efficient and effective procurement program in Environmental Health field activities.

In executing this responsibility, SEC will act as a service point and will not interpose its judgment as to whether or not an item is needed. Its only control function will be to insure that all actions are in keeping with law and regulation. There will be, however, a very positive leadership role for SEC to exercise in encouraging and stimulating good procurement practice. This would include such activities as encouraging the scientific evaluation of specialized equipment and facilitating the exchange of the resulting data among the environmental health programs and laboratories.

Most field stations, depending on their needs and competencies, should be delegated authority to handle local procurement

such as: Open-market purchases up to $2500 (or a lower limit on occasion), "mandatory source" procurement, procurement under "blanket" purchase orders, and procurement utilizing SF-44's or paid from an agent-cashier fund.

SEC should also serve as the focal point for property accountability records for the more important pieces of technical equipment held by the environmental health programs. There should be limitations in terms of dollar-value and type of equipment on the items to be included. This would have the advantage of using the excellent SEC computer resources to produce national inventory listings for use by Headquarters program officials in their decisions on transfer and use of property. It should be emphasized that decision-making would remain with the program. SEC would provide a facilitating service

Because of the technical nature of the equipment needed, the water pollution special projects should receive procurement services through SEC in the same way as other environmental health field stations and laboratories and not through Regional Office channels. Modern scientific equipment of the kind used by these projects and their field laboratories is complex and expensive. The Water Laboratory at Salt Lake City, a small field station of the Colorado River Project,

has over $200,000 of equipment. The equipment on the Great Lakes-Illinois River Project has a purchase valuation of probably $1.5 million. A project has continuous supply needs--both in quantity and type--which bear little resemblance to typical Regional Office procurement. This is well illustrated by the listing of procurement actions for the week of March 11, 1963 for GLIRBP and for all the rest of Region V, submitted as an Appendix to the "Petrich Report." This tabulation indicated the week's procurement for GLIRBP involved 33 orders costing $19,164 while all other Regional Office procurement was covered in 21 purchase orders totaling $1864. Over 3/4 of the GLIRBP procurement was for scientific or technical supplies and equipment; the Regional Office procurement was for office supplies and equipment.

The normal Regional Office procurement function is a relatively simple, clerical-level activity functioning under an Office Services Supervisor, GS-9. The full-time purchasing clerk is usually a GS-5. This type of staffing is well suited to ordering office supplies and equipment from GSA catalogues and mandatory sources and to make some open-market purchases of relatively simple items. It could not be expected to advise on sources of scientific equipment, preparation of specifications, or even on procurement procedure of more than a routine nature. For example, the fact that procurement personnel in one of the better Regional Offices were unaware of the "sole source

of supply" exception to routine procurement procedure delayed for several months the acquisition of some important scientific equipment.

The inadequacy of Regional Office procurement activity in the scientific and technical area means that PHS program personnel are really doing the procurement job. The Petrich Report concluded that "The GLIRBP Administrative Office performs essentially all procurement functions except the signature of approval on Purchase Orders....." The Water Laboratory in Salt Lake City also does a rather complete procurement job. It writes specifications, selects kind of equipment needed, contacts suppliers, secures quotations (for procurement under $2500), and analyzes the quotations. Most project officials do not object to this system by which their actions, in effect, are endorsed without question by the Regional Office procurement personnel. But this is not a sound system. Project scientists are not procurement specialists and there is always a potential danger of a serious but unintentional violation of regulations. The Office Services Supervisor is required to certify to a procurement action which is beyond the capacity of her staff to understand and critically review. Further, the system is wasteful of scarce professional talent and it does not provide for any effective tapping of knowledges gained by other scientists of

advantages and disadvantages of each make and model of laboratory equipment.

The centralization of the more important scientific procurement at SEC would make use of a thoroughly competent staff, experienced in scientific procurement, and headed by a GS-13 Procurement Officer. It would provide the best means of transmitting to newly established projects the experience gained on other projects and in the SEC laboratories on the performance advantages and disadvantages of each make and model of equipment. It would also make available information to all stations on the location of specialized environmental health equipment which might be transferred or borrowed to meet special needs.

2. Fiscal Services

The maintenance of the official accounts and production of all reports required by law and regulation is no longer a job which can be done most effectively by hand-posting. In addition to mandatory record-keeping, good fiscal management demands, above all, timely and analytical reports to program management. This is more important for major projects and laboratories than for office-oriented operations because of their larger proportion of non-salary items. In addition to large procurement activity, field laboratories incur expenditures for plant maintenance, utilities, service contracts, and the like. At Headquarters and at Regional Offices, on the other hand,

fixed salaries are the major item of expenditure; the only significant variable is travel (which can be estimated rather easily); and procurement is not a major part of the expenditure.

Neither the single program laboratories (now in operation or planned for the future) nor the water basin projects are large enough to be independent accounting points. The establishment of an accounting point at each field activity would be uneconomical both in terms of staffing costs and the investment in accounting machines. In addition, an unnecessary proliferation of accounting points simply multiplies problems for the Division of Finance in supervising the points and preparing summary reports.

Several alternate arrangements are possible. At present the Radiological Health Laboratories contract with PHS hospitals for accounting services; the shellfish laboratories contract with SEC for such services; and the WSPC projects are served by the Regional Offices.

The hospitals and the Regional Offices use essentially the same system--a system designed and installed by the PHS Division of Finance--which is based on the use of paper tape produced as a by-product of an accounting machine posting. The tapes are submitted to the Washington Division of Finance for consolidation

and summary reports are submitted back to the field activity. For a variety of reasons, these reports have arrived too late to be useable for purposes of financial management. For example, July allotment reports were received in Region VII on September 10. In Region VIII the September report had not been received by October 10. The tenth of the next month is about the latest possible deadline if a report is to be used for fund management purposes.

Environmental Health should have, as far as possible, a single system for providing fiscal services to its field activities, not three or four systems. The computer based system at SEC can supply directly complete analyses of the type needed for projects and laboratories and has been able to produce reports routinely on the third to fifth working day after the end of a reporting period. It is believed that this system can and should be expanded to cover all major Environmental Health projects and field activities. This could well lead toward the eventual goal of a single integrated accounting system for the new Bureau of Environmental Health.

RECOMMENDATION: It is recommended that:

13. SEC fiscal offices be expanded to serve as an accounting point for all environmental health field stations and major projects.

3. Personnel

(a) Position Classification

The review and classification of positions is not just an administrative service. It is, by its very nature, a control function designed to assure equal pay for equal work throughout the functional area served. For this reason, centralization of the classification of field positions for professional and key administrative personnel is advantageous. This would not prevent a delegation of classification authority up to GS-7 to field stations large enough to justify a classification competence on their staffs. To have one field station serve other field stations in classification matters, however, would provide no advantage over a well-operated Headquarters Bureau classification office.

If significant classification authority is to be kept in Washington, the classification process must be speeded up and made more responsive to field needs. Current plans to delegate extensive personnel authority to the Bureau level offers an excellent opportunity to streamline this process, but a positive effort will be required. Almost every field station has complained about the slowness of classification

actions which are processed through Washington. Although the central Personnel Office has deserved some, and received its full share of blame for such delays, it should be pointed out that there has frequently been a significant delay between the dispatch of a request from the field and its receipt by the Personnel Office. As long as the clearance procedure can result in six or seven reviews in a Headquarters division and two or three reviews at the Bureau level, prompt action can not be expected.

RECOMMENDATION. It is recommended that:

14. (a) Washington Bureau Headquarters serve as the focal point for classification,

(b) classification requests be permitted to flow directly to the action point and

(c) division and bureau offices exercise their control functions through the working budget or by means of an approved staffing pattern, and not by time-consuming multiple review of each classification request.

This need not affect the present extensive delegation of classification authority to SEC, or delegations of a more

restrictive scope to a few of the larger field laboratories. The Regional Offices could continue to classify clerical positions for WSPC basin projects, especially where the principal project headquarters are located in the same city as the Regional Office. On the other hand, the Regional Office review of position descriptions for program jobs for which the Regional Office has no classification authority does not justify the time delay that this review produces.

(b) Appointment

The appointment process (the issuance of the journal action) is a simple ministerial function, not a decision-making activity. It is the selection process which produces the substantive decision to hire or not to hire. The production of a journal action merely verifies the legality of the action and assures compliance with all applicable rules and regulations. Yet it is not unusual for a field station to "select" an eligible candidate from a Civil Service Register and then wait a month for the various Washington offices to clear the appointment action. It is most important that the officer-in-charge of a field station be able to make a definite commitment to an applicant and establish a firm entrance-on-duty date. This

will improve recruitment by avoiding the loss of well-qualified candidates; it will shorten the period in which jobs remain vacant; and it will eliminate correspondence, telephone calls, and amended journal actions caused by last-minute changes in entrance-on-duty dates.

Therefore, to the extent possible, appointment processing should be available locally to all field stations. Since the possibility of technical error is no greater in a GS-12 appointment than in one at the GS-2 level, the grade limitation should be as high as possible. Appointment authority through GS-12 is now held by the Regional Offices. Geographical proximity is the principal consideration and where a relatively small environmental health activity is located in the same city as a Regional Office, it should use these services of the Regional Office and not attempt to develop its own personnel competence.

Delegation of appointment authority will not prevent a division program officer from requiring all selections for certain types of positions to be cleared with him before appointment. This can, and should be, a direct person-to-person clearance of the qualifications of the applicant. It should not involve a lengthy chain of clerical and administrative review and clearance points.

RECOMMENDATION. It is recommended that:

15. Appointment authority through GS-12 be delegated to the heads of individual program field laboratories and major projects to which appointment processing is not otherwise available within the normal commuting area of the laboratory or project.

4. Local Responsibilities and Staffing

In spite of the use of Cincinnati and Washington as administrative servicing centers for environmental health field activities, there is still a very major responsibility to be carried by each field station in managing its resources of men, money, and material. It is at the field station that the basic management decisions must be made. There is also a wide range of miscellaneous administrative activities not previously mentioned with which the manager of any field station must be concerned. A partial listing of these would cover: property management, motor vehicle management, building maintenance, fire protection and safety programs, building security -- passes, keys, etc., hours of work and overtime, mail and messenger arrangements, printing and duplicating, establishment and operation of stock rooms, library services, in-service training, and employee health services. It should be the clearly defined responsibility of the executive officer of the parent division to assure that major project and laboratory management officers are carefully selected; properly trained, instructed and oriented; and fully supported.

RECOMMENDATION. It is recommended that:

16. In view of the broad administrative management responsibilities which must be exercised, any field station with a staff of 25 or more employees have a program management officer of grade GS-11 to GS-13.

The exact grade and the clerical and technical support required will vary in accordance with the complexities of the situation, the authorities to be exercised, and the individual station needs.

RECOMMENDATION. It is further recommended that:

17. The administrative complement of a field station of 75 or more employees normally include provision for a management intern or trainee.

The advantages of this latter recommendation are:

(a) The field station will benefit by having an additional staff member with intelligence, imagination, and a fresh approach.

(b) The employee will benefit by receiving a sound, practical orientation in real field problems before moving on to other assignments.

(c) The Service will benefit by having some of its future program management officers and executive officers well-grounded in practical problems of administration of field activities.

The present geographic dispersion of environmental health field stations generally prevents any economic grouping of them for the provision of those local administrative services not provided by SEC or Washington. There are, however, two areas which will have more than one environmental health installation. These are Boston with the Northeastern Radiological Health Laboratory and the Northeastern Water Pollution Control Laboratory, and Kingston, Rhode Island, with a shellfish laboratory and a Water Quality Laboratory. In each location one of the stations should be designated as the principal administrative servicing point in order to avoid a duplication of staffing competencies. This same principle should be applied to the extent practicable where the Headquarters of two or more major projects are physically close to one another.

In the past, the initiative in selecting locations for Environmental Health field installations has rested largely with the program divisions operating independently of each other. There is a need for coordinated facility planning by the Bureau on the basis of the total Environmental Health needs rather than the separate needs of the individual programs.

Difficult

D. Summary

To summarize briefly, SEC would become the fiscal accounting point, the focal point for procurement, and the source of guidance on supply management for the environmental health field stations and major projects outside of the Washington and Cincinnati areas. Each field activity would pay for this service on the basis of workload data and

estimated costs. Washington Environmental Health Bureau Headquarters would provide leadership in personnel management. Each field installation would exercise some local procurement authority and most of them would exercise extensive appointment authority. Some of the larger stations would have limited classification authority, probably not to exceed GS-7.

A major factor in the successful operation of this proposed system for providing administrative services to field installations is the training, supervision, and guidance made available to the local staffs. In personnel this should come from the bureau headquarters in Washington, in procurement and fiscal matters from SEC, and to coordinate these and for all other matters from the Executive Offices of the responsible divisions. Formal training sessions and issuance of written guides, for example, need to be supplemented by on-the-job training assignments in the administrative servicing center and by regular and extensive field visits by supervisory personnel. These field visits would not only aid in the training and supervision of the field staffs, but would also give the personnel, fiscal, and supply management specialists a practical knowledge and real understanding of field problems. In some areas, such as position classification, the actual service can best be performed in the field, not at Headquarters. This should be emphasized to the maximum extent possible.

III. COALESCENCE OF THE WHOLE STRUCTURE

A. Headquarters Organization Relevance

The unity and coherence of a field organization stems from its headquarters. Field activities tend to possess a down-to-earth realism that gives them a great deal of stability and resilience. They are nonetheless sensitive to headquarters problems. Anything tentative or unresolved, any major gap area, and many of the frustrations and delays affecting the Headquarters organization are seen in bold relief from the vantage point of a field station and are of deep concern to field personnel. At this time a number of matters of very serious import are unsettled at Headquarters. It cannot be said without equivocation that the proposed new Bureau of Environmental Health will come into being precisely as planned. If not, what will the pattern be? How will the water program questions be resolved? What effect will that resolution have on other categorical environmental health programs?

The persistence of these questions does not encourage integration of program efforts. The divisions are much more sure of what is expected of them as administrators of their separate appropriations. There is a commendable amount of cross-servicing among divisions on a strictly lateral agreement basis. One division has a need and negotiates an arrangement with another division to meet it for a price. The divisions are inclined to avoid over

involvement with one another or with bureau components. The Bureau hesitates to "move in" to guide the development of collaborative arrangements into a pattern which takes into account the needs of the whole, also because of those unanswered questions. what does this mean

Three specific needs must be met if the headquarters and field structures of the separate categorical programs are to be welded into a strong, integrated, and effective attack on the nation's environmental health problems.

1. Need for Organizational Authority

The organized effort required is much more than an assembling under one head of the several categorical programs. Integrated health program planning with respect to the total environment is required. Overlapping categorical program interests need better definition and more positive coordination. Concerted effort is necessary to assure effective consultation to individual States and in dealing with the complexities of real life situations. Problems which simply do not fit neatly into any single categorical area must be analyzed and assigned. Resolution of these, and many other matters of concern to the total environmental health community involve a forthright implementation of bureau-wide management perspective. Clear organizational authority not now possessed by the Surgeon General and the Secretary and resources beyond those that reasonably can be assembled within the increment of the present BSS management fund are required to make this possible.

2. Need for Biomedical Research Facilities

The single most important reason for placing the environmental health programs of the Service under one head is the need to study and understand more fully the additive effects on human health of the environmental contaminants an individual may receive through the air he breathes, the water he drinks, the food he eats, and the radiation and other types of exposure to which he is subjected. In order to pursue this activity, the Service must have one or more environmental health facilities for multi-program biomedical and human effects research. The proposed comprehensive Environmental Health Center could fulfill this need. However, until or unless it, or something comparable to it, becomes a reality, this will be a major gap area in the total environmental health structure.

3. Need for Headquarters Consolidation

At present the headquarters organization is seriously handicapped by physical dispersion. Major components are located in downtown Washington; Bethesda and Rockville, Maryland; and at four separate addresses in Cincinnati, Ohio. This scatter of activities in and around Washington and Cincinnati is costly and inefficient. Problems of communication which would be difficult under any circumstances are multiplied. One of the immediate effects of the construction of a

National Environmental Health Center would be to provide for a better physical grouping of related headquarters activities.

B. Interim Measures

Pending the development of the basic remedies outlined in "A," every effort should be made to maximize existing cohesive forces among programs. Some of these are discussed briefly in the following paragraphs.

1. The Common Dilemma

One factor which should draw these programs closer together is the extent to which they share a common dilemma. The essence of this dilemma is that environmental contaminants are generally a by-product of something demonstrably worthwhile whereas the health agency's assessment of their health hazards is neither accepted without question (as it is with respect to most infectious and chronic disease public health menaces) nor is its validity fully demonstrable.

Environmental health problems do not present clear-cut choices between good and bad in every instance. The dangers from the environmental health standpoint of insecticides have to be weighed against the consequences of not using them to eliminate pests of one type or another. The dangers inherent in radiological contamination from atomic tests must be weighed against defense needs and the development of peaceful uses of atomic energy.

This "weighing" process will always be difficult, but it is especially difficult now. Environmental health problems include some with which no one is yet competent to deal effectively. Many of them, if not corrected now, will have their principal effect on posterity. Some of the potentially most significant cause and effect relationships between environmental contaminants and morbidity and mortality are yet to be clearly defined. And it may be too late to take any effective remedial action after hypotheses with respect to the long term genetic and other effects of exposures are proven.

Because of the interests of major groups in the contaminant causal actions, health programs are not in a position to unilaterally establish national standards. There is a major role for the Bureau to play in supplementing and concerting the strength of individual programs in representing and serving as the official spokesman for the general health interest. No individual program should have to stand alone in supporting positive health considerations or in opposing causal actions seriously detrimental to the public health.

2. The Common Advantage

Another factor which should strengthen the unity of environmental health programs is their lack of any "conflict of interest" in their single-minded pursuit of national health goals. The Public Health

Service is not responsible for the production of food, goods, or power and its clientele is not dominated by special producer interests. For this reason, PHS components are able both individually and as an organized group to represent the public health interests in a clearly uninhibited manner. No other organization having an interest in these programs is quite so fortunate. The strength of this consideration should be concerted through Bureau, as distinguished from single program, enunciation.

3. The Existing Biomedical Resources

Until the human effects research center gap is filled, the greatest possible collaboration should be developed among those now working in the area of biomedical and human effects research. The Service has in its occupational health staff some experience in dealing with the additive biomedical and human effects of environmental contaminants and exposures from a variety of sources and vectors. This work has been done principally in high concentration and high yield situations in controlled environments. However, the experience gained may be transferable to a very considerable degree to problems in the general artificial environment. Several other divisions have limited activities in the biomedical research area. The current budgetary provision for environmental health sciences should be helpful in providing resources

for research development and planning. A marshalling of these resources in such a way as to encourage scientific interchange and mutual support might go a long way in providing an interim solution to the present need.

Internal collaboration could be supplemented by extramural research. Some of the existing research grants of the environmental health divisions are biomedical in character. The new National Advisory Environmental Health Committee has recently assumed the responsibility of the National Advisory Health Council insofar as grants for environmental health research and environmental health training are concerned. In the performance of this Council function the committee may be able to foster some biomedical extramural research of a multi-program character.

RECOMMENDATION. It is recommended that:

18. The Service and the Department utilize every appropriate means to obtain bureau level organizational authority.
19. Efforts to resolve problems impeding the establishment of the National Environmental Health Center be unrelenting.
20. Further study be given to the present potential for greater intra-bureau collaboration in the biomedical research area.

List of Appendices

1. Environmental Heaith Appropriations, 1960 and 1964
   (Table of Amounts by Appropriation, by Direct Operations, Grants and Total)

2. Environmental Health Appropriations, 1960 and 1964
   (Bar Graph - same data)

3. Physical Location of Environmental Health Divisional Components
   (Chart showing Branch and Section Structure Divided Among Washington, Cincinnati, and elsewhere)

4. Comprehensive Water Projects Schedule
   (Chart showing Water Projects by Fiscal Year in which Planned for Intensive Operation)

5. Facility Construction Status and Schedule

6. Single Program Field Laboratories - Environmental Health
   (Map of U.S. showing location of present and planned laboratories)

7. Recommended Field Structure of Environmental Health Administration and Organization (Schematic Chart)

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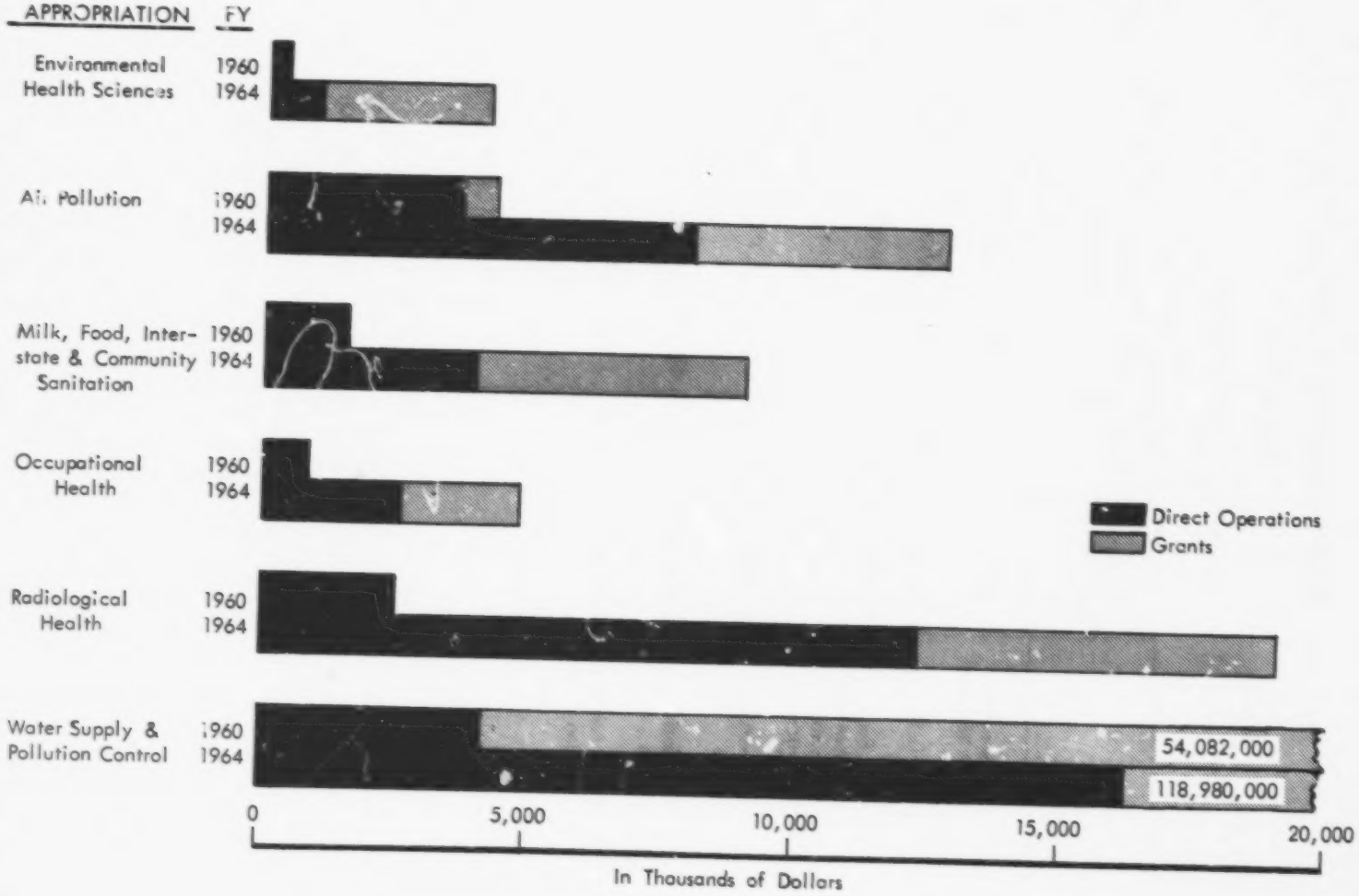
ENVIRONMENTAL HEALTH APPROPRIATIONS

1960 and 1964

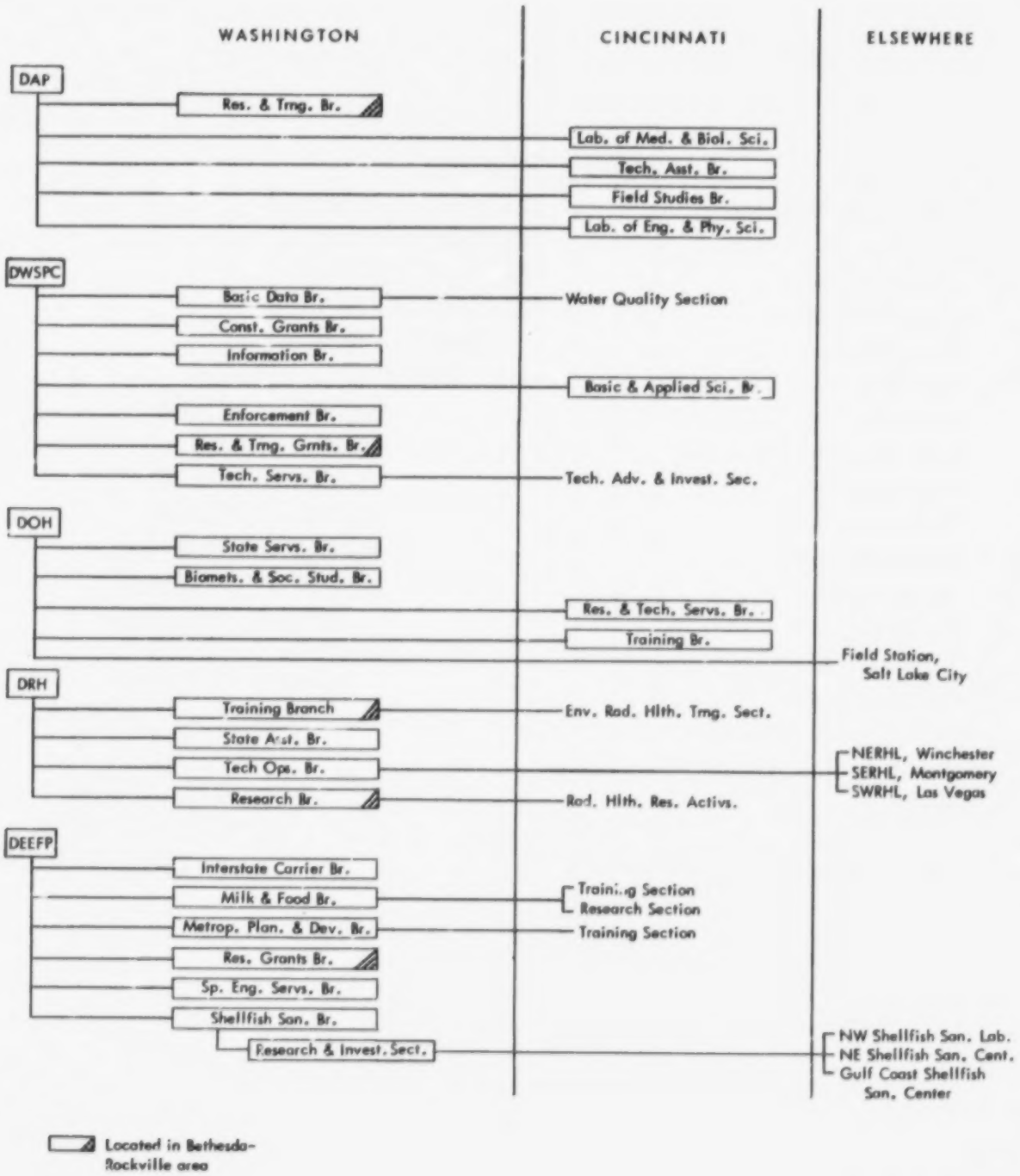
(dollar amounts in thousands)

	FY - 1960			FY - 1964			Direct operations FY-64 as a % of FY-60
	Direct Operations	Grants	Total	Direct Operations	Grants	Total	
Environmental Health Sciences	$487	-	$487	$1,097	$3,127	$4,224	252%
Air Pollution	$3,723	$590	$4,313	$8,103	$4,851	$12,954	218
Milk, Food, Interstate and Community Sanitation	$1,558	-	$1,558	$3,989	$5,020	$9,009	256
Occupational Health	$870	-	$870	$2,793	$2,197	$4,990	321
Radiological Health	$2,583	-	$2,583	$12,436	$6,709	$19,145	481
Water Supply and Pollution Control	$4,266	$49,816	$54,082	$16,676	$102,304	$118,980	391
Totals	$13,487	$50,406	$53,893	$45,094	$34,208	$169,302	334%

ENVIRONMENTAL HEALTH APPROPRIATIONS, 1960 and 1964

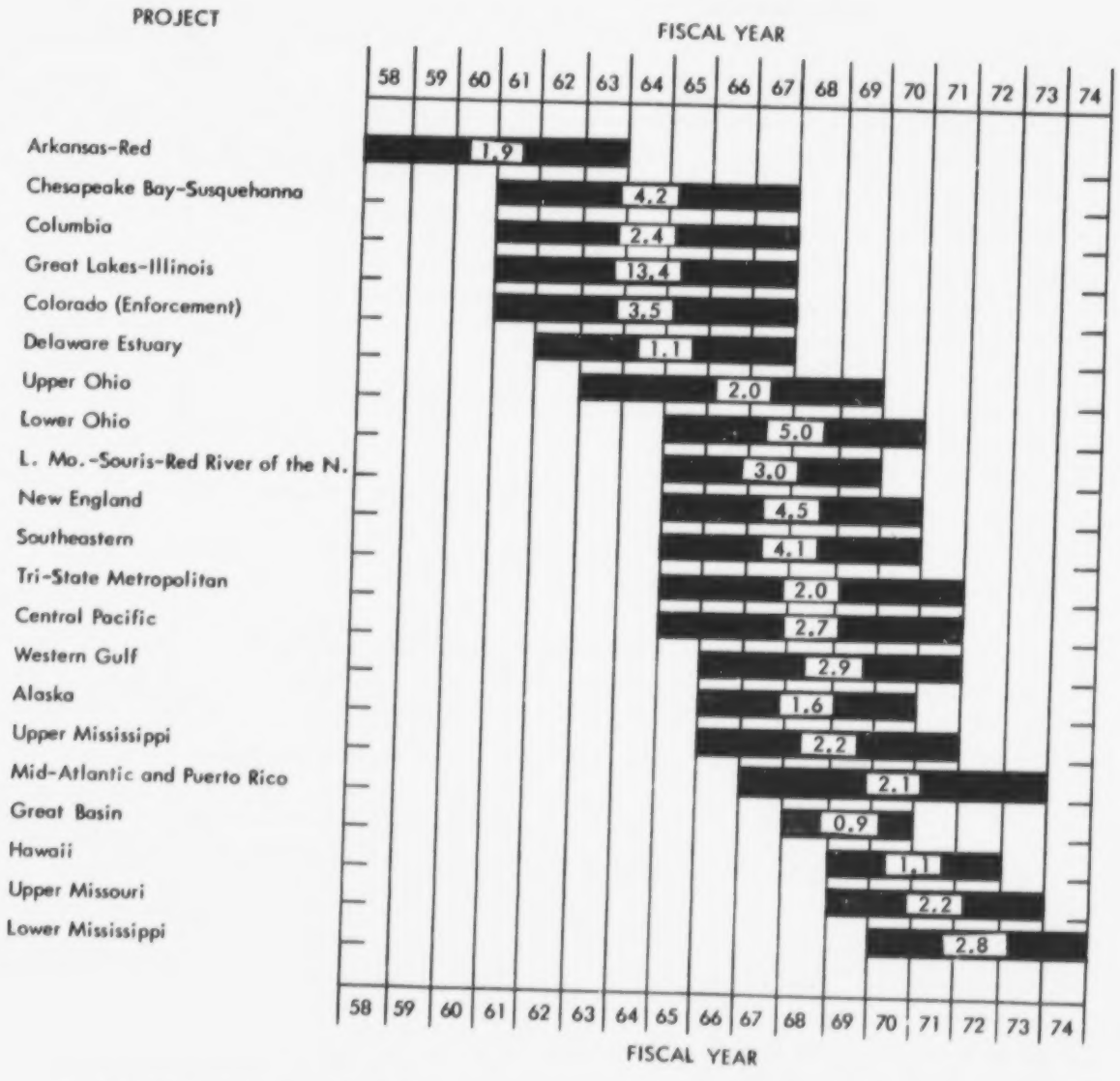


PHYSICAL LOCATION OF ENVIRONMENTAL HEALTH DIVISIONAL COMPONENTS



Appendix 4

COMPREHENSIVE WATER PROJECTS SCHEDULE WITH ESTIMATED COST IN $MILLIONS



Total Cost all Projects $76.4 (Including Colorado Enforcement

FACILITY CONSTRUCTION STATUS AND SCHEDULE

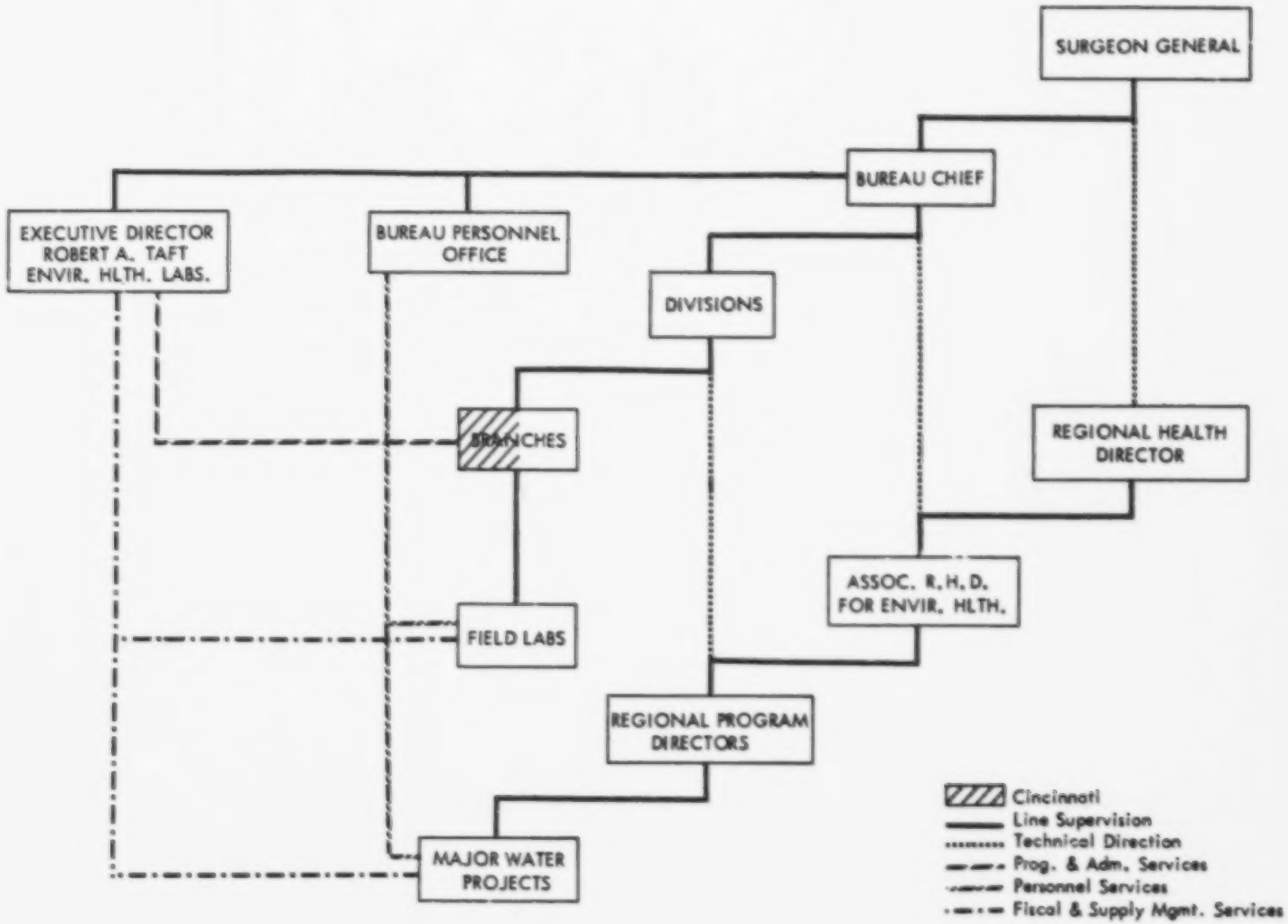
ENVIRONMENTAL HEALTH

As of October 31, 1963

PROJECT	Funds Appropriated		Construction Contract		
	Planning	Construction	Invitation	Award	Completion
Shellfish San. Laboratory New England	x	x	x	x	1-24-64
Shellfish San. Laboratory Gulf Coast	x	x	x	x	x
Water Pollution Laboratory Ada, Oklahoma	x	x	4-20-64	5-29-64	8-15-65
Water Pollution Laboratory Corvallis, Oregon	x	x	3-4-64	4-20-64	7-1-65
Water Pollution Laboratory College, Alaska	x	x	2-21-64	3-30-64	9-30-65
Water Pollution Laboratory Athens, Georgia	x	x	3-16-64	4-27-64	9-27-65
Water Quality Laboratory (Marine) Kingston, Rhode Island	x	x	6-23-64	8-11-64	10-12-65
Water Quality Laboratory (Fresh Water) Duluth, Minn.	x	x	11-18-64	12-30-64	5-13-66
Water Pollution Laboratory Ann Arbor, Michigan	x	o	11-26-64	1-7-65	6-23-66
Water Pollution Laboratory Boston, Massachusetts	x	x	11-30-64	1-11-65	6-27-66
Water Pollution Laboratory Mid-Atlantic Region	x	o			

ENVIRONMENTAL HEALTH SINGLE PROGRAM FIELD LABORATORIES

RECOMMENDED FIELD STRUCTURE OF ENVIRONMENTAL HEALTH PROGRAMS AND ACTIVITIES



Appendix 7